AZ-400 - Microsoft Azure DevOps Solutions

Microsoft - Microsoft Azure - Virtualizzazione e Cloud

Durata:	Lingue:	Certificazione:
5 Giorni	**Italiano**	**Microsoft Certified: Azure DevOps Engineer Expert**

Descrizione del corso

This training course is the set of 7 official Microsoft modules: AZ-400T01: Implementing DevOps Development Processes AZ-400T02: Implementing Continuous Integration AZ-400T03: Implementing Continuous Delivery AZ-400T04: Implementing Dependency Management AZ-400T05: Implementing Application Infrastructure AZ-400T06: Implementing Continuous Feedback AZ-400T07: Designing a DevOps Strategy The training path is preparatory to the Exam AZ-400: Microsoft Azure DevOps Solutions valid for Microsoft Certified: Azure DevOps Engineer Expert To obtain the Azure DevOps Engineer certification, you must have the Azure Administrator Associate certification or the Azure Developer Associate certification

Programma

AZ-400T01: Implementing DevOps Development Processes

Module 1: Getting started with Source Control

- What is Source Control?
- Benefits of Source Control
- Types of source control systems
- Introduction to Azure Repos
- Migrating from TFVC to Git
- Authenticating to your Git Repos

Module 2: Scaling git for enterprise DevOps

- How to structure your git repo? Mono Repo or Multi-Repo?
- Git Branching workflows

- Collaborating with Pull Requests
- Why care about GitHooks?
- Fostering Internal Open Source
- Git Version
- Public projects
- Storing Large files in Git

Module 3: Implement & Manage Build Infrastructure
- The concept of pipelines in DevOps
- Azure Pipelines
- Evaluate use of Hosted vs Private Agents
- Agent pools
- Pipeline & Concurrency
- Azure DevOps loves Open Source projects
- Azure Pipelines YAML vs Visual Designer
- Setup private agents
- Integrate Jenkins with Azure Pipelines
- Integration external source control with Azure Pipelines
- Analyse & Integate Docker multi stage builds

Module 4: Managing application config & secrets
- Demo: SQL Injection attack
- Implement secure mp; compliant development process
- Rethinking application config data
- Manage secrets, tokens & certificates
- Implement tools for managing security and compliance in a pipeline

Module 5: Implement a mobile DevOps strategy
- Introduction to Visual Studio App Center
- Manage mobile target device sets and distribution groups
- Manage target UI test device sets
- Provision tester devices for deployment
- Provision tester devices for deployment

AZ-400T02: Implementing Continuos Integration

Module 1: Implementing Continuous Integration in an Azure DevOps Pipeline
- Continuous Integration Overview

• Implementing a Build Strategy

Module 2: Managing Code Quality and Security Policies
• Managing Code Quality
• Managing Security Policies

Module 3: Implementing a Container Build Strategy
• Implementing a Container Build Strategy

AZ-400T03: Implementing Continuous Delivery
Module 1: Design a Release Strategy
• Introduction to Continuous Delivery
• Release strategy recommendations
• Building a High Quality Release pipeline
• Choosing a deployment pattern
• Choosing the right release management tool

Module 2: Set up a Release Management Workflow
• Create a Release Pipeline
• Provision and Configure Environments
• Manage And Modularize Tasks and Templates
• Integrate Secrets with the release pipeline
• Configure Automated Integration and Functional Test Automation
• Automate Inspection of Health

Module 3: Implement an appropriate deployment pattern
• Introduction into Deployment Patterns
• Implement Blue Green Deployment
• Feature Toggles
• Canary Releases
• Dark Launching
• AB Testing
• Progressive Exposure Deployment

AZ-400T04: Implementing Dependency Management
Module 1: Designing a Dependency Management Strategy
• Introduction
• Packaging dependencies

• Package management
• Implement a versioning strategy

Module 2: Manage security and compliance
• Introduction
• Package security
• Open source software
• Integrating license and vulnerability scans
• Inspect open source software packages for security and license compliance to align with corporate standards
• Configure build pipeline to access package security and license rating
• Configure secure access to package feeds

AZ-400T05: Implementing Application Infrastructure
Module 1: Infrastructure and Configuration Azure Tools
• Learning Objectives
• Infrastructure as Code and Configuration Management
• Create Azure REsources using ARM Templates
• Create Azure Resources using Azure CLI
• Create Azure Resources by using Azure PowerShell
• Additional Automation Tools
• Version Control
• Lab Deploy to Azure using ARM templates
• Module Review Questions

Module 2: Azure Deployment Models and Services
• Learning Objectives
• Deployment Models and Options
• Azure Infrastructure-as-a-Service (IaaS) Services
• Azure Automation with DevOps
• Desired State Configuration (DSC)
• Azure Platform-as-a-Service (PaaS) services
• Azure Service Fabric
• Lab Azure Automation – IaaS or PaaS deployment
• Moduel review Questions

Module 3: Create and Manage Kubernetes Service Infrastructure
• Learning Objectives

• Azure Kubernetes Service
• Lab Deploy and Scale AKS Cluster
• Module Review Questions

Module 4: Third Party and Open Source Tools available with Azure
• Learning Objectives
• Chef
• Puppet
• Ansible
• Cloud-Init
• Terraform
• Lab Provision and configure an App in Azure Using X
• Module Review Questions

Module 5: Implement Compliance and Security in your Infrastructure
• Security and Compliance Principles with DevOps
• Azure Security Center
• Lab Integrate a scanning extension or tool in an AZ DevOps pipeline/security center
• Module Review Questions

AZ-400T06: Implementing Continuous Feedback
Module 1: Recommend and design system feedback mechanisms
• The inner loop
• Continuous Experimentation midset
• Design practices to measure end-user satisfaction
• Design processes to capture and analyze user feedback from external sources
• Design process to automate application analytics

Module 2: Implement process for routing system feedback to development teams
• Implement tools to track system usage, feature usage, and flow
• Implement routing for mobile application crash report data
• Develop monitoring and status dashboards
• Integrate and configure ticketing systems with development team's work management system

Module 3: Optimize feedback mechanisms

- Site Reliability Engineering
- Analyse telemetry to establish a baseline
- Perform ongoing tuning to reduce meaningless or non-actionable alerts
- Analyze alerts to establish a baseline
- Blameless PostMortems and a Just Culture

AZ-400T07: Designing a DevOps Strategy

Module 1: Planning for DevOps

- Transformation Planning
- Project Selection
- Team Structures

Module 2: Planning for Quality and Security

- Planning a Quality Strategy
- Planning Secure Development

Module 3: Migrating and Consolidating Artifacts and Tools

- Migrating and Consolidating Artifacts
- Migrating and Integrating Source Control